



Energy  
Quarterly Update

Q4 2016

## Energy Sector Trends

### Election Results Drive Production<sup>1</sup>

President-elect Trump's administration will likely enable increased U.S. oil production. Deepwater Gulf of Mexico producers may benefit from a decrease in royalty rates, eased abandonment bonding requirements, and extended lease durations. The new administration may also open the some areas of the Alaska National Wildlife Refuge for exploration.



### U.S. Demand Increasingly Satiated by Shale<sup>2</sup>

With relaxed export restrictions, the United States will likely continue strong production over the next five years. Considerable developments in shale deposits will largely drive this high level of domestic production. As the U.S. appetite for petroleum is increasingly satisfied by domestic production, OPEC producers will focus efforts on gaining a foothold in emerging markets.

### Global Offshore Liquid Discoveries Plummet<sup>3</sup>

According to a report by Rystad Energy, the total 2016 offshore liquids resources discovered fell to 2.3 billion barrels – less than half of the volume discovered in 2014 and a 90% decline from the volume discovered in 2010. This decline is largely attributable to the multi-billion barrel discoveries made in Brazil in previous years. Discoveries in the Gulf of Mexico have remained relatively stable.

### Demand Drives Up Natural Gas Prices<sup>4</sup>

Despite relatively inexpensive production, Asian demand for natural gas has kept prices high despite increasing production in North America. North American production continues to be bolstered by new pipelines, extensions on existing pipelines, and consistently high demand for the fossil fuel. Demand is expected to taper as prices may push some demand toward crude oil.

## In This Update

- Energy Trends
- Economic Outlook
- Industry Analysis
- Select M&A Transactions
- Appendix

This update will focus on news and trends in the following areas:

- Integrated O&G
- O&G Drilling
- O&G Equipment and Services
- O&G Exploration and Production
- O&G Refining and Marketing
- O&G Storage and Transportation

## Who We Are

Deloitte Corporate Finance LLC is a leading global middle market M&A adviser. The firm's professionals have extensive knowledge within various sectors of the Energy space.

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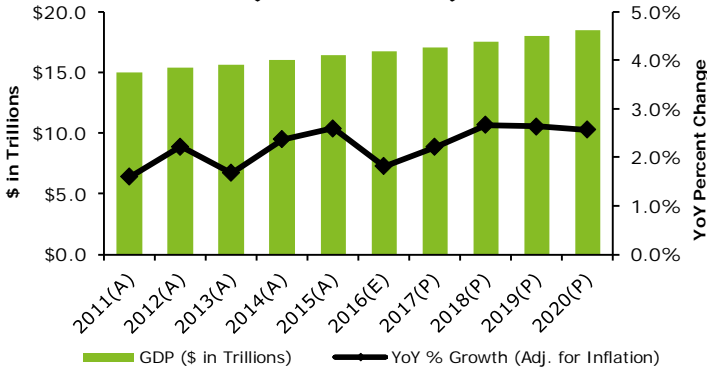
## In the News

**December 20, 2016** – President-elect Trump has selected former Texas governor Rick Perry as his nominee for Secretary of Energy, expressing that his administration plans to “take advantage of our huge natural resource deposits to make America energy-independent and create vast new wealth for our nation.” Perry has historically advocated for downsizing the Department of Energy.<sup>5</sup>

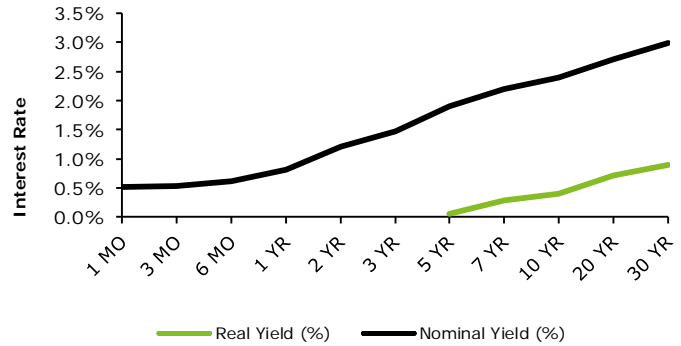
**December 27, 2016** – The Federal Energy Regulatory Commission (“FERC”) has conditionally approved Atlas Power Finance LLC’s (“Atlas Power”) acquisition of roughly 8,000 MW of U.S., natural gas-fired generating plants from Engie. Atlas Power is a joint venture between Dynegy Inc. and Energy Capital Partners LLC, formed as a subsidiary of Atlas Power, LLC for the purpose of acquiring certain assets of Engie.<sup>6</sup>

## Macroeconomic Outlook

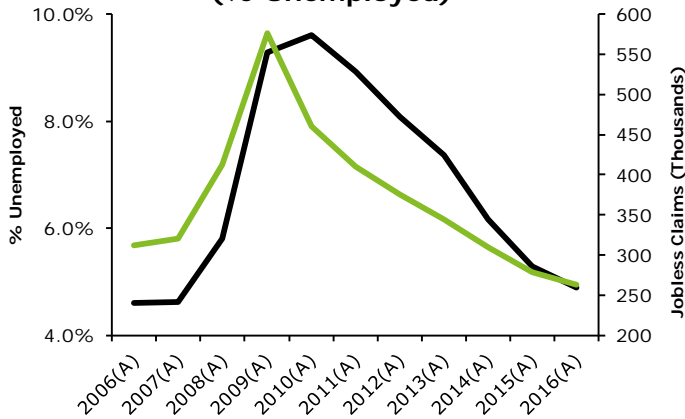
**U.S. Gross Domestic Product (% in Trillions)<sup>1</sup>**



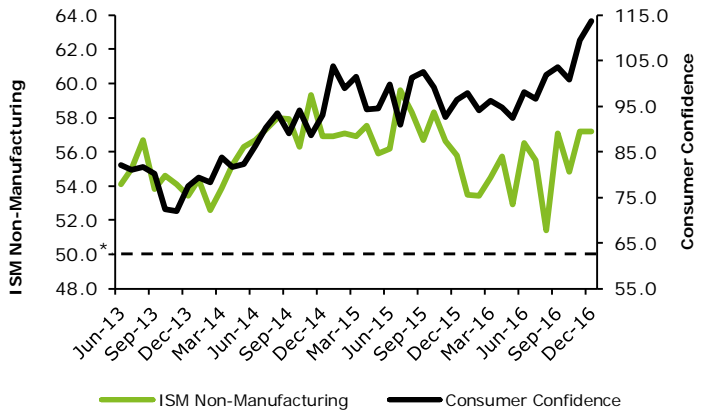
**U.S. Treasury Yield Curve (Nominal vs. Real)<sup>2</sup>**



**U.S. Unemployment Rate (% Unemployed)<sup>3</sup>**



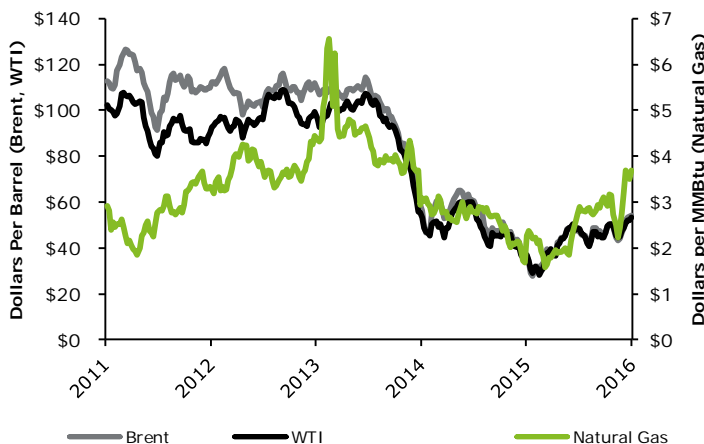
**ISM Non-Manufacturing Index and Consumer Confidence Index<sup>4</sup>**



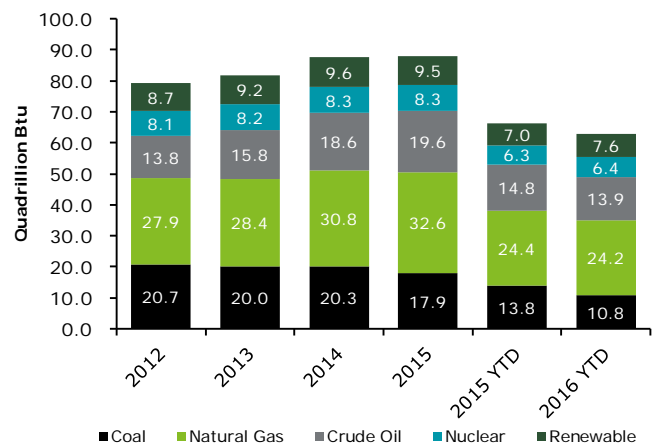
\*An ISM Non-Manufacturing Index value above 50 signals economic expansion.

## Energy Sector Outlook

**Brent, WTI, and Natural Gas Prices (2012 – 2016)<sup>5</sup>**



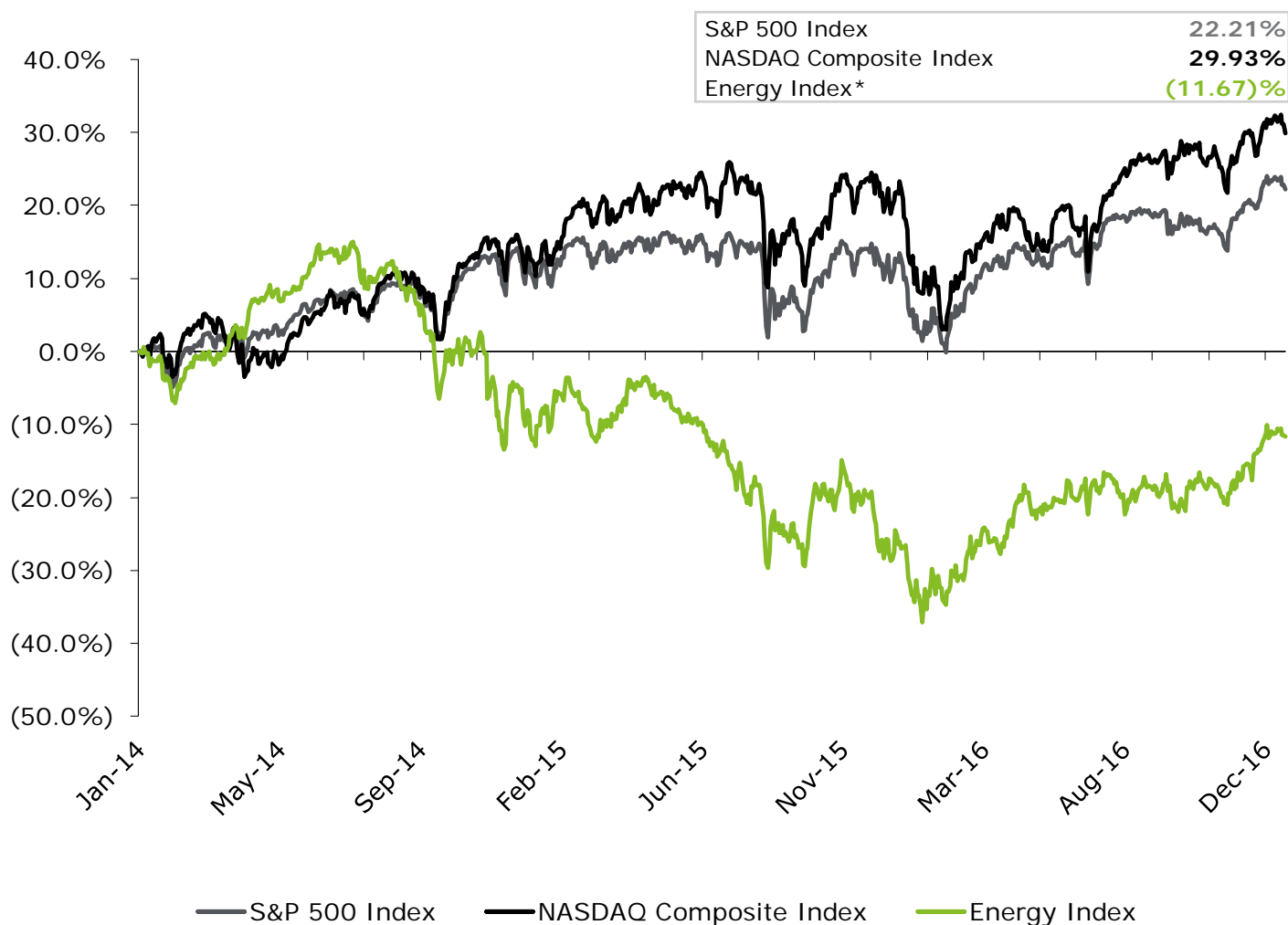
**U.S. Energy Production by Source<sup>6</sup>**



## Energy Sector Breakdown & Trading Statistics<sup>1</sup>

Sector	Number of Companies	% of 52 Week High	Median Revenue CAGR (3 Yr)	Median LTM EBITDA	Median EBITDA Margin	Median Enterprise Value	Last Twelve Months		NTM	
							EV/Revenue	EV/EBITDA	EV/EBITDA	
(\$ in Millions)										
Integrated Oil and Gas (3)	3	94.5 %	(21.1) %	\$13,532.0	13.4 %	\$261,255.4	2.6 x	18.9 x	8.6 x	
Oil and Gas Drilling (7)	7	88.5	(18.0)	702.0	38.5	4,583.2	2.7	9.0	8.7	
Oil and Gas Equipment and Services (6)	6	95.6	(15.1)	279.0	10.6	21,374.7	2.2	26.1	21.2	
Oil and Gas Exploration and Production (8)	8	92.4	(17.5)	2,384.6	24.8	35,170.6	6.0	22.1	10.7	
Oil and Gas Refining and Marketing (7)	7	94.2	(17.6)	745.2	7.1	7,505.0	0.7	11.5	7.5	
Oil and Gas Storage and Transportation (8)	8	91.6	0.4	3,988.5	34.2	52,746.2	4.8	15.4	11.7	
<b>Energy Index</b>	<b>39</b>	<b>93.3 %</b>	<b>(17.5) %</b>	<b>\$1,564.9</b>	<b>19.1 %</b>	<b>\$28,272.6</b>	<b>2.7 x</b>	<b>17.2 x</b>	<b>9.7 x</b>	

## Public Comparables Three-Year Stock Market Performance<sup>1</sup>

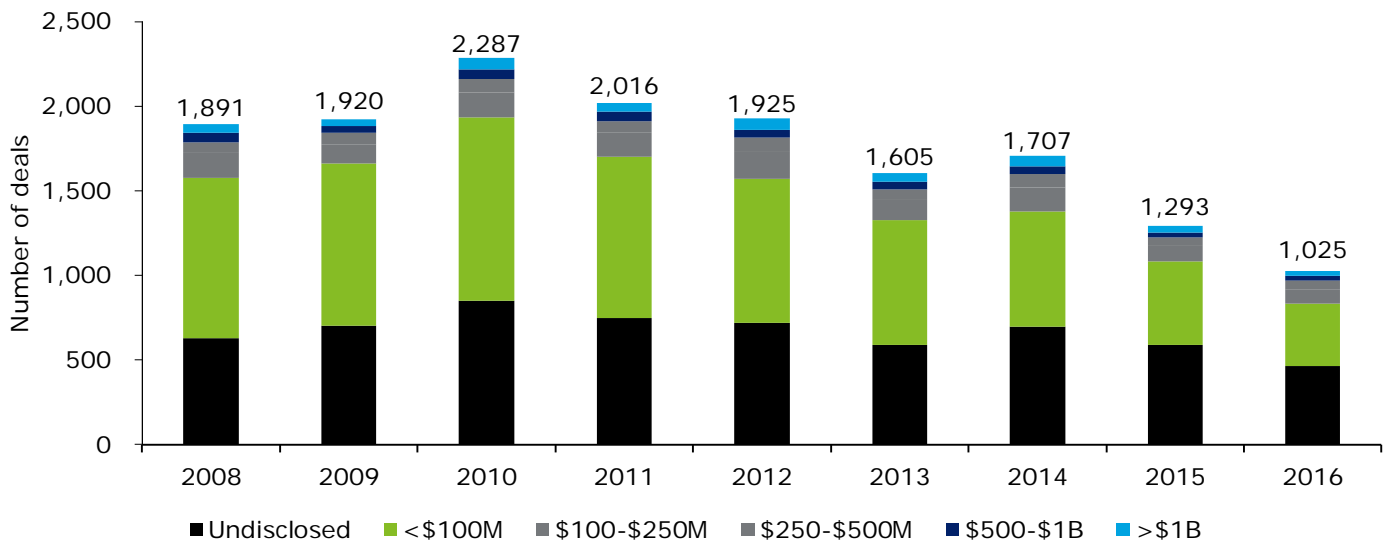


\*Energy Index companies listed on pages 6 & 7 in the Appendix.

### Select Energy M&A Transactions<sup>1</sup>

Close Date *	Target/Acquiror	Target Business Description	Enterprise Value ("EV")	EV/ EBITDA
Pending	<b>Heurtey Petrochem S.A.</b> Axens SA	Operates as an oil and gas engineering company worldwide.	\$130.8	23.9 x
Pending	<b>Seventy Seven Energy Inc.</b> Patterson-UTI Energy, Inc.	Provides a range of wellsite services and equipment to land-based exploration and production customers in the United States.	2,019.0	20.2
Pending	<b>Alon USA Energy, Inc.</b> Delek US Holdings, Inc.	Refines and markets petroleum products, primarily in the South Central, Southwestern, and Western regions of the United States.	1,309.5	15.4
Pending	<b>Energy Transfer Partners</b> Sunoco Logistics Partners	Engages in the natural gas midstream, and intrastate transportation and storage businesses in the United States.	59,501.0	12.4
Pending	<b>Mobil Oil Nigeria</b> Nipco Investments	Markets petroleum products in Nigeria.	487.0	11.9
Pending	<b>JP Energy Partners</b> American Midstream Partners	Owns, operates, develops, and acquires a portfolio of midstream energy assets in the United States.	475.3	11.6
Pending	<b>Western Refining, Inc.</b> Tesoro Corporation	Operates as an independent crude oil refiner and marketer of refined products.	6,208.6	10.6
Pending	<b>Savanna Energy Services</b> Total Energy Services Inc.	Operates as a drilling, well servicing, and oilfield rental company in Canada, the United States, and Australia.	287.5	7.4
Pending	<b>Petrobras Argentina S.A.</b> Pampa Energia S.A.	Operates as an integrated energy company.	1,835.8	6.2
Pending	<b>Blackgold International Holdings</b> Vibrant Group	Engages in producing, mining, and trading thermal coal in the People's Republic of China.	124.4	4.7
Pending	<b>Shell Refining Company Berhad</b> Malaysia Hengyuan International	Engages in the refining and manufacturing of petroleum products in Malaysia.	383.0	4.0
Dec-16	<b>Fjords Processing AS</b> National Oilwell Varco, Inc.	Provides support services and manufactures equipment for oil, gas, produced water, and seawater clients.	145.2	10.9

### Annual Energy M&A Transaction Volume<sup>1</sup>



\*Pending transactions sorted by announcement date.

## Appendix

Public Comparables Analysis<sup>1</sup>

Company (Ticker)	% of 52 Week High	LTM Revenue	Revenue CAGR (3 Yr)	LTM EBITDA	EBITDA Margin	Enterprise Value ("EV")	Last Twelve Months		NTM
							EV/Revenue	EV/EBITDA	EV/EBITDA
<i>(\$ in Millions)</i>									
<b>Integrated Oil and Gas (3)</b>									
Chevron Corporation (NYSE:CVX)	98.9 %	\$101,162.0	(21.1) %	\$13,532.0	13.4 %	\$261,255.4	2.6 x	19.3 x	7.3 x
Exxon Mobil Corporation (NYSE:XOM)	94.5	196,866.0	(19.6)	22,282.0	11.3	421,755.5	2.1	18.9	8.6
Occidental Petroleum Corporation (NYSE:OXY)	90.8	10,108.0	(23.9)	3,327.0	32.9	59,586.1	5.9	17.9	12.3
<b>Median</b>	<b>94.5 %</b>	<b>\$101,162.0</b>	<b>(21.1) %</b>	<b>\$13,532.0</b>	<b>13.4 %</b>	<b>\$261,255.4</b>	<b>2.6 x</b>	<b>18.9 x</b>	<b>8.6 x</b>
<b>Mean</b>	<b>94.7 %</b>	<b>\$102,712.0</b>	<b>(21.5) %</b>	<b>\$13,047.0</b>	<b>19.2 %</b>	<b>\$247,532.4</b>	<b>3.5 x</b>	<b>18.7 x</b>	<b>9.4 x</b>
<b>Oil and Gas Drilling (7)</b>									
Diamond Offshore Drilling, Inc. (NYSE:DO)	66.2 %	\$1,684.7	(12.5) %	\$783.0	46.5 %	\$4,509.2	2.7 x	5.8 x	7.3 x
Helmerich & Payne, Inc. (NYSE:HP)	90.2	1,624.2	(18.0)	587.8	36.2	7,915.1	4.9	13.5	21.3
Nabors Industries Ltd. (NYSE:NBR)	92.8	2,427.8	(24.1)	702.0	28.9	7,930.4	3.3	11.3	11.7
Noble Group Limited (SGX:N21)	34.3	48,421.5	(14.0)	(942.6)	N/A	4,583.2	0.1	N/A	10.1
Patterson-UTI Energy Inc. (NasdaqGS:PTEN)	91.1	1,007.5	(22.4)	253.1	25.1	4,563.5	4.5	18.0	NA
Rowan Companies plc (NYSE:RDC)	87.1	2,027.2	13.2	1,089.6	53.7	3,977.6	2.0	3.7	7.0
Transocean Ltd. (NYSE:RIG)	88.5	4,329.0	(18.2)	1,769.0	40.9	11,793.1	2.7	6.7	7.0
<b>Median</b>	<b>88.5 %</b>	<b>\$2,027.2</b>	<b>(18.0) %</b>	<b>\$702.0</b>	<b>38.5 %</b>	<b>\$4,583.2</b>	<b>2.7 x</b>	<b>9.0 x</b>	<b>8.7 x</b>
<b>Mean</b>	<b>78.6 %</b>	<b>\$8,788.9</b>	<b>(13.7) %</b>	<b>\$606.0</b>	<b>38.6 %</b>	<b>\$6,467.5</b>	<b>2.9 x</b>	<b>9.8 x</b>	<b>10.7 x</b>
<b>Oil and Gas Equipment and Services (6)</b>									
Baker Hughes Incorporated (NYSE:BHI)	94.7 %	\$10,825.0	(16.9) %	\$3.0	0.0 %	\$26,832.9	2.5 x	8944.3 x	29.7 x
FMC Technologies, Inc. (NYSE:FTI)	97.3	4,877.5	(6.9)	516.9	10.6	8,224.7	1.7	15.9	15.0
Halliburton Company (NYSE:HAL)	96.5	15,887.0	(13.3)	2,139.0	13.5	55,768.2	3.5	26.1	21.9
National Oilwell Varco, Inc. (NYSE:NOV)	85.8	8,281.0	(20.9)	41.0	0.5	15,916.5	1.9	388.2	NA
Schlumberger Limited (NYSE:SLB)	96.5	27,810.0	(11.6)	6,389.0	23.0	127,693.3	4.6	20.0	17.5
Weatherford International plc (NYSE:WFT)	56.7	6,355.0	(22.6)	(160.0)	N/A	12,006.1	1.9	N/A	21.2
<b>Median</b>	<b>95.6 %</b>	<b>\$9,553.0</b>	<b>(15.1) %</b>	<b>\$279.0</b>	<b>10.6 %</b>	<b>\$21,374.7</b>	<b>2.2 x</b>	<b>26.1 x</b>	<b>21.2 x</b>
<b>Mean</b>	<b>87.9 %</b>	<b>\$12,339.3</b>	<b>(15.4) %</b>	<b>\$1,488.1</b>	<b>9.5 %</b>	<b>\$41,073.6</b>	<b>2.7 x</b>	<b>### x</b>	<b>21.1 x</b>
<b>Oil and Gas Exploration and Production (8)</b>									
Anadarko Petroleum Corporation (NYSE:APC)	95.1 %	\$7,904.0	(17.1) %	\$2,634.0	33.3 %	\$56,032.2	7.1 x	21.3 x	10.8 x
Apache Corp. (NYSE:APA)	92.0	4,918.0	(32.3)	2,755.0	56.0	33,054.4	6.7	12.0	9.2
ConocoPhillips (NYSE:COP)	94.3	23,082.0	(25.8)	3,581.0	15.5	86,775.8	3.8	24.2	9.5
Devon Energy Corporation (NYSE:DVN)	90.1	10,385.0	4.0	2,366.0	22.8	37,286.8	3.6	15.8	12.2
EOG Resources, Inc. (NYSE:EOG)	92.4	6,976.1	(17.8)	2,403.2	34.4	64,217.3	9.2	26.7	14.7
Hess Corporation (NYSE:HES)	95.0	4,689.0	(39.9)	1,068.0	22.8	24,424.6	5.2	22.9	10.5
Pioneer Natural Resources Co. (NYSE:PXSD)	92.3	3,534.0	4.8	814.0	23.0	31,163.6	8.8	38.3	14.7
Southwestern Energy Company (NYSE:SWN)	69.4	2,439.0	(6.1)	650.0	26.7	8,496.2	3.5	13.1	10.6
<b>Median</b>	<b>92.4 %</b>	<b>\$5,947.0</b>	<b>(17.5) %</b>	<b>\$2,384.6</b>	<b>24.8 %</b>	<b>\$35,170.6</b>	<b>6.0 x</b>	<b>22.1 x</b>	<b>10.7 x</b>
<b>Mean</b>	<b>90.1 %</b>	<b>\$7,990.9</b>	<b>(16.3) %</b>	<b>\$2,033.9</b>	<b>29.3 %</b>	<b>\$42,681.4</b>	<b>6.0 x</b>	<b>21.8 x</b>	<b>11.5 x</b>
<b>Oil and Gas Refining and Marketing (7)</b>									
Alon USA Energy, Inc. (NYSE:ALJ)	75.4 %	\$3,603.6	(21.2) %	\$72.6	2.0 %	\$1,229.9	0.3 x	16.9 x	7.5 x
HollyFrontier Corporation (NYSE:HFC)	79.3	10,524.2	(17.9)	745.2	7.1	7,505.0	0.7	10.1	6.0
Marathon Petroleum Corporation (NYSE:MPC)	95.3	54,372.0	(12.7)	4,426.0	8.1	43,994.5	0.8	9.9	7.9
PBF Energy Inc. (NYSE:PBF)	72.9	14,532.3	(12.6)	362.3	2.5	5,261.7	0.4	14.5	4.5
Phillips 66 (NYSE:PSX)	95.1	69,108.0	(22.6)	3,098.0	4.5	52,933.7	0.8	17.1	9.3
Valero Energy Corporation (NYSE:VLO)	94.2	73,938.0	(17.6)	5,591.0	7.6	34,720.1	0.5	6.2	5.6
Western Refining, Inc. (NYSE:WNR)	94.4	7,698.2	(4.1)	568.4	7.4	6,551.5	0.9	11.5	7.6
<b>Median</b>	<b>94.2 %</b>	<b>\$14,532.3</b>	<b>(17.6) %</b>	<b>\$745.2</b>	<b>7.1 %</b>	<b>\$7,505.0</b>	<b>0.7 x</b>	<b>11.5 x</b>	<b>7.5 x</b>
<b>Mean</b>	<b>86.7 %</b>	<b>\$33,396.6</b>	<b>(15.5) %</b>	<b>\$2,123.4</b>	<b>5.6 %</b>	<b>\$21,742.3</b>	<b>0.6 x</b>	<b>12.3 x</b>	<b>6.9 x</b>
<b>Oil and Gas Storage and Transportation (8)</b>									
Energy Transfer Equity, L.P. (NYSE:ETE)	96.6 %	\$36,237.0	0.5 %	\$5,093.0	14.1 %	\$86,124.1	2.4 x	16.9 x	11.1 x
Energy Transfer Partners, L.P. (NYSE:ETP)	82.3	21,126.0	(14.2)	4,440.0	21.0	57,426.9	2.7	12.9	9.0
Enterprise Products Partners L.P. (NYSE:EPD)	89.8	22,698.5	(19.4)	4,819.8	21.2	81,013.5	3.6	16.8	14.5
Kinder Morgan, Inc. (NYSE:KMI)	88.7	13,058.0	3.4	6,161.7	47.2	86,701.3	6.6	14.1	12.3
Magellan Midstream Partners LP (NYSE:MMP)	97.7	2,163.5	8.8	1,031.2	47.7	21,263.2	9.8	20.6	16.2
Spectra Energy Corp. (NYSE:SE)	93.4	4,934.0	(1.7)	2,409.0	48.8	48,065.5	9.7	20.0	15.8
Williams-Sonoma Inc. (NYSE:WSM)	78.1	5,088.5	6.3	666.4	13.1	4,300.5	0.8	6.5	6.3
Williams Partners L.P. (NYSE:WPZ)	94.2	7,299.0	0.3	3,537.0	48.5	44,049.7	6.0	12.5	10.1
<b>Median</b>	<b>91.6 %</b>	<b>\$10,178.5</b>	<b>0.4 %</b>	<b>\$3,988.5</b>	<b>34.2 %</b>	<b>\$52,746.2</b>	<b>4.8 x</b>	<b>15.4 x</b>	<b>11.7 x</b>
<b>Mean</b>	<b>90.1 %</b>	<b>\$14,075.6</b>	<b>(2.0) %</b>	<b>\$3,519.8</b>	<b>32.7 %</b>	<b>\$53,618.1</b>	<b>5.2 x</b>	<b>15.0 x</b>	<b>11.9 x</b>



Recent Transactions<sup>1</sup>

Target/Acquiror	Sub-Sector	Close Date	LTM Revenue	LTM EBITDA	EBITDA Margin	Enterprise Value ("EV")	Last Twelve Months	
							EV/Revenue	EV/EBITDA
<b>Heurtey Petrochem S.A.</b> Axens SA	Oil and Gas Equipment and Services	Pending	\$407.4	\$5.5	1.3 %	\$130.8	0.3 x	23.9 x
<b>Seventy Seven Energy Inc.</b> Patterson-UTI Energy, Inc.	Oil and Gas Equipment and Services	Pending	606.4	99.7	16.4	2,019.0	3.3	20.2
<b>Alon USA Energy, Inc.</b> Delek US Holdings, Inc.	Oil and Gas Refining and Marketing	Pending	3,603.6	85.3	2.4	1,309.5	0.4	15.4
<b>Energy Transfer Partners</b> Sunoco Logistics Partners	Oil and Gas Storage and Transportation	Pending	21,126.0	4,781.0	22.6	59,501.0	2.8	12.4
<b>Mobil Oil Nigeria</b> Nipco Investments	Oil and Gas Refining and Marketing	Pending	297.6	41.1	13.8	487.0	1.6	11.9
<b>JP Energy Partners</b> American Midstream Partners	Oil and Gas Storage and Transportation	Pending	504.3	41.1	8.1	800.0	1.6	19.5
<b>Western Refining, Inc.</b> Tesoro Corporation	Oil and Gas Refining and Marketing	Pending	7,698.2	586.5	7.6	6,208.6	0.8	10.6
<b>Savanna Energy Services</b> Total Energy Services Inc.	Oil and Gas Drilling	Pending	237.6	39.0	16.4	287.5	1.2	7.4
<b>Petrobras Argentina S.A.</b> Pampa Energia S.A.	Integrated Oil and Gas	Pending	1,790.1	296.6	16.6	1,835.8	1.0	6.2
<b>Blackgold International Holdings</b> Vibrant Group	Oil and Gas Equipment and Services	Pending	285.0	26.2	9.2	124.4	0.4	4.7
<b>Shell Refining Company Berhad</b> Malaysia Hengyuan International	Oil and Gas Refining and Marketing	Pending	1,826.1	96.0	5.3	383.0	0.2	4.0
<b>Fjords Processing AS</b> National Oilwell Varco, Inc.	Oil and Gas Equipment and Services	Dec-16	227.9	13.3	5.8	145.2	0.6	10.9
<b>Transportadora de Gas del Perú S.A.</b> Enagás Internacional, S.L.U.	Oil and Gas Storage and Transportation	Dec-16	596.1	393.6	66.0	1,619.8	2.7	4.1
<b>Avance Gas Holding</b> Hemen Holding	Oil and Gas Storage and Transportation	Nov-16	200.2	2.5	1.2	21.0	0.1	8.5
<b>Critical Flow Solutions Inc.</b> CIRCOR International, Inc.	Oil and Gas Equipment and Services	Oct-16	122.0	25.0	20.5	214.0	1.8	8.6
<b>Median</b>			<b>\$504.3</b>	<b>\$41.1</b>	<b>9.2 %</b>	<b>\$487.0</b>	<b>1.0 x</b>	<b>10.6 x</b>
<b>Mean</b>			<b>\$2,635.2</b>	<b>\$435.5</b>	<b>14.2 %</b>	<b>\$5,005.8</b>	<b>1.3 x</b>	<b>11.2 x</b>

Source: Capital IQ.

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### Page 2:

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### Page 3:

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1. S&P Capital IQ. January 24, 2017. Data as of December 31, 2016.

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1. S&P Capital IQ. January 24, 2017. Data as of December 31, 2016.



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